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"…finally…a thin form-factor monitor that I could make color judgments with, that was affordable and ready for field use."

Dave Sperling finds CRT quality in a thin flat panel monitor.

Dave Sperling has been eagerly awaiting the arrival of OLED monitor technology for his work serving a wide variety of television, documentary and corporate clients in the New York City area. Since making the switch to HD some three years ago, LCDs have taken the place of CRT field monitors. But for Sperling, it has been an uneasy compromise.

"For years, we used CRTs for everything despite the fact that they were big, bulky, fragile, consumed lots of power and needed a lot of hooding around them to work outside," Sperling said. "Because of the superb image quality, I kept using them with HD cameras, either the expensive HD CRTs, or sometimes more affordable SD ones when using cameras with SD outputs. But there have been times when CRT's just haven't been a practical option. With LCDs, it's been a tradeoff of image quality for size and portability. I've used numerous different ones, and they all have major problems. You can't trust them because they lack the color depth of CRTs. The viewing angle issues, too, can really cause problems."

Fortunately, OLED has promised a no-compromise advance in technology – all the quality of CRTs and more in a thin, flat panel.

"When I saw my first OLED display at NAB a few years back, I thought 'MAN, this is INCREDIBLE!' Unfortunately, it wasn't in field-friendly form and cost a fortune," he said. "But at NAB 2010, I saw the PVM-740. The image really looks like a CRT. It has great color depth, deep blacks, awesome contrast, and can run for a long time without changing batteries. I felt that, finally, this was a thin form-factor monitor that I could make color judgments with, that was affordable and ready for field use."

PVM-740 OLED Monitor

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Sperling recently got the opportunity to give the PVM-740 a field test. Before putting it to use, he thoroughly familiarized himself with its operation.

"Viewing angle is a non-issue with OLED, just like with CRT monitors. This is a major improvement in so many situations."*

"The key to learning the PVM-740 is the menu system," he said. "It is very user-friendly and I had mastered it in a half-hour. The real challenge isn't programming the buttons. It's about really understanding how you like to work best. It is a very flexible tool. You aren't forced to work the way it wants you to work. Once I'd really thought this through, I quickly had the buttons set up for my style of working. For example, I assigned a button for the waveform monitor and audio meters, another for volume control, etc."

In use, what really sets the PVM-740 apart from LCD technology is the consistency of the image.

"With LCD monitors, I've had to educate and accommodate producers," he said. "There's a lot you have to work through. I've had to let them know that what they see off-angle is not what the camera is seeing. I've also had to position monitors guessing where the producer was going to be sitting. If his viewpoint is higher or lower than expected, it changes the perceived brightness of the image on an LCD. I had one producer giving instructions to a gaffer based on his wrong viewing angle. I don't like to get into fights with producers, but I had to sit him down at the proper angle so he could actually tell what the lighting looked like."

With the PVM-740, those issues evaporate.

"Viewing angle is a non-issue with OLED*, just like with CRT monitors," he said. "This is a major improvement in so many situations. It makes my job easier because the producer can see what I am doing."

Sperling put the PVM-740 through its paces on a number of different assignments. A shoot for General Electric's power station for the new Chevy Volt electric car showed the advantages of OLED at every turn.

"We were shooting with a couple of (Sony XDCAM EX™) EX3 camcorders," he said. "We only had the car for about two hours. The PVM-740 gave us great images outside with only minimal hooding. We could easily evaluate our image in daylight."

The setup shifted from static "beauty shots" to car-to-car views driving along in the back of another vehicle.

"Rigging the PVM-740 was very simple," Sperling said. "It didn't become a major issue, as it would be working with an LCD monitor. The director could see the monitor from different angles as we changed our camera positions - sometimes shooting from baby legs, sometimes handheld, shooting out both the back and side doors of the van, and at times I was using it as an operating monitor as well. It was great having the waveform monitor on screen, since we needed to keep rolling as the sun was going in and out of clouds. For once, I felt that even though we were all viewing the monitor from different places, we were finally all seeing the same thing!"

"The PVM-740 gave us great images outside...we could easily evaluate our image in daylight."

In the end, Sperling noted one major issue working with the PVM-740 on multicamera shoots and other monitors.

"The producer or client would ask 'why does that camera look so much better?'"

* on the PVM-740

Dave Sperling has been a DP/cameraman for more than 25 years in the video and film industries, working on a wide variety of projects. He has served as Director of Photography for more than a dozen independent feature films and done numerous documentary projects on science and music. He also creates software data management systems for theatre, film, and video.

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